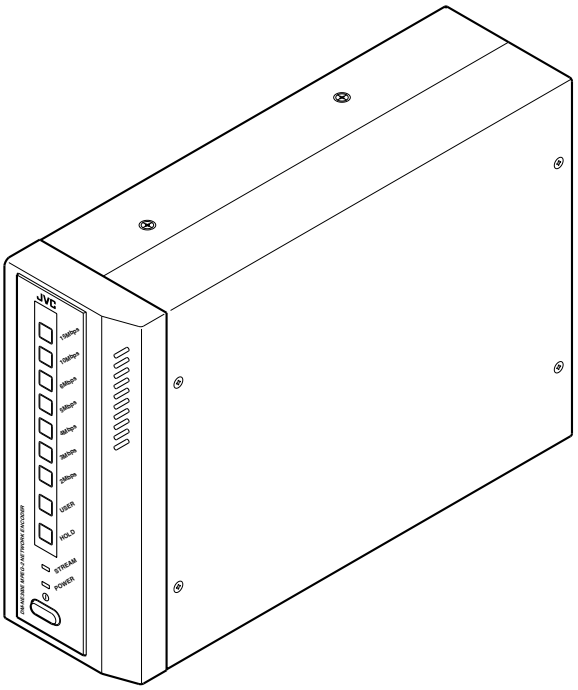
JVC®

MPEG-2 NETWORK ENCODER

DM-NE300E Instruction Manual



This instruction book is made from 100% recycled paper.

LST0165-001B

SAFETY PRECAUTIONS

■ Place of storage and use

Please avoid storing or using this unit in the following places:

- ●Extremely hot or cold places beyond the allowable temperature for operation (0˚C-40˚C).
- ●Humid or dry places beyond the allowable humidity range for operation (30%-80% RH).
- ●Dusty or sandy places.
- ●Places exposed to oil, smoke or steam, such as the kitchen vicinity.
- ●Intensely vibrating or unstable places.
- ●Places prone to condensation.
- ●Places that generate strong magnetic fields, e.g., transformer or motor.
- ●Places near devices that generate electric waves, e.g., transceiver or mobile phone.
- ●Places that generate radiation, X-rays or corrosive gases.

■ Handling the unit

- ●Please do not place heavy objects on the unit, like a monitor on TV.
- ●Please keep the mobile rack into the compartment. As injury may result from fingers getting clamped.
- ●Please do not block the ventilation openings.
- ●Avoid violent shocks to the unit. Do not drop the unit.

■ Maintaining the unit (Please turn off the power before performing maintenance work.)

Please wipe the unit with a soft cloth. Do not wipe it with thinner or benzene lest the surface melts or becomes dull. For stubborn stains, wipe first with a water-diluted neutral detergent and then wipe dry.

■ Please use the supplied power cord. Using a different type or damaged cord may cause tire or electric shock.

■ To save energy, be sure to turn off the system when not in use.

SAFETY PRECAUTIONS (FOR EUROPE)

IMPORTANT (In the United Kingdom)
Mains Supply (230 V AC)
WARNING - THIS APPARATUS MUST BE EARTHED

The wires in this mains lead are coloured in accordance with the following code;

GREEN-and-YELLOW : EARTH
BLUE : NEUTRAL
BROWN : LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.
The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol or coloured GREEN or GREEN-AND-YELLOW.
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or which is coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

POWER SYSTEM

Connection to the mains supply

This unit operates on voltage of 220 V to 240 V AC, 50 Hz/60 Hz.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

To prevent electric shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

WARNING

THE UNIT CONTAINS A BUILT IN LITHIUM BATTERY FOR MEMORY BACKUP THAT MUST ONLY BE REPLACED BY SUITABLY QUALIFIED SERVICE PERSONNEL.
FOR BATTERY REPLACEMENT, TAKE THE UNIT TO YOUR DEALER OR A JVC SERVICE STATION.

Sicherheitshinweise

■ Betrieb und Lagerung

Lagern und betreiben Sie das Gerät nicht in Umgebungen, in denen

- extrem hohe oder niedrige Temperaturen (unter 5°C oder über 35°C) herrschen,
- extrem hohe oder niedrige Luftfeuchtigkeit (unter 30% oder über 80%) herrscht,
- große Mengen Schmutz oder Staub vorhanden sind,
- das Gerät Öl, Dampf oder Rauch ausgesetzt ist (z. B. in der Umgebung einer Küche),
- Erschütterungen auftreten können und eine ausreichende Stabilität nicht gewährleistet ist,
- sich Kondenswasser bilden kann,
- starke Magnetfelder auftreten können (verursacht z. B. durch einen Transformator oder einen Motor),
- elektromagnetische Wellen auftreten können (verursacht z. B. durch einen Transceiver oder ein Mobiltelefon),
- Strahlung (z. B. Röntgenstrahlen) oder Schadgase austreten können.

■ Umgang mit dem Gerät

- Stellen Sie auf dem Gerät keine schweren Gegenstände (wie Monitore oder TV-Geräte) ab.
- Gehen Sie bei Festinstallation des Geräts mit Umsicht vor, um Verletzungen zu vermeiden.
- Decken Sie niemals die Lüftungsöffnungen ab.
- Setzen Sie das Gerät keinerlei Erschütterungen und Schlägen aus und lassen Sie es nicht fallen.
- Trennen Sie den Netzadapter vom Netz, wenn Sie das Gerät nicht benutzen. Sie sparen auf diese Weise Energie.

■ Reinigung (Schalten Sie das Gerät unbedingt ab, bevor Sie die Reinigung durchführen!)

Wischen Sie das Gerät mit einem weichen Tuch ab. Verwenden Sie keine aggressiven Reinigungsmittel wie Verdünner oder Reinigungsbenzin, da diese die Geräteoberfläche angreifen oder beschädigen können. Hartnäckige Verschmutzungen entfernen Sie mit einem weichen Tuch, welches Sie zuvor mit einer Lösung aus Wasser und einem Neutralreiniger angefeuchtet haben. Wischen Sie das Gerät danach mit einem weichen Tuch trocken.

■ Bitte verwenden Sie ausschließlich das beiliegende Netzkabel. Die Verwendung eines Kabels anderen Typs oder eines schadhaften Kabels kann die Geräteleistung beeinträchtigen. Es besteht die Gefahr eines Stromschlags.

■ Schalten Sie das Gerät ab, wenn Sie es nicht benutzen. Sie sparen auf diese Weise Energie.

WICHTIG (bei Betrieb in Großbritannien)

NETZSPANNUNG: 230 V AC
ACHTUNG: DIESES GERÄT IST ZU ERDEN!

Die Leiter des Netzkabels sind wie folgt farblich gekennzeichnet:

- GRÜN-GELB : ERDE
- BLAU : NEUTRAL
- BRAUN : SPANNUNGSFÜHRENDER LEITER

Da die Farbkodierungen des Netzkabels, welches diesem Gerät beiliegt, nicht mit den Farbcodes der Kontakte des Steckverbinders übereinstimmen müssen, gehen Sie wie folgt vor:
Der GRÜN-GELB markierte Leiter muss an den Kontakt des Steckverbinders angeschlossen werden, der entweder mit dem Buchstaben E oder dem Schutzerdesymbol markiert oder GRÜN bzw. GRÜN-GELB farbkodiert ist. Der BLAU markierte Leiter muss an den Kontakt des Steckverbinders angeschlossen werden, der entweder mit dem Buchstaben N markiert oder SCHWARZ farbkodiert ist. Der BRAUN markierte Leiter muss an den Kontakt des Steckverbinders angeschlossen werden, der entweder mit dem Buchstaben L markiert oder ROT farbkodiert ist.

VERSORGUNG

Anschluss an das Stromnetz

Das Gerät wird mit einer Netzspannung von 220 V bis 240 V AC, 50 Hz/60 Hz betrieben.

WARNUNG:

SETZEN SIE DIESES GERÄT NIEMALS REGEN ODER FEUCHTIGKEIT AUS. ES BESTEHT DIE GEFAHR VON FEUER ODER STROMSCHLAG!

ACHTUNG

Öffnen Sie niemals das Gehäuse des Geräts. Es besteht Stromschlaggefahr! Im Innern befinden sich keine vom Benutzer zu wartenden Teile. Wenden Sie sich bei Wartungsfragen an einen qualifizierten Servicetechniker.

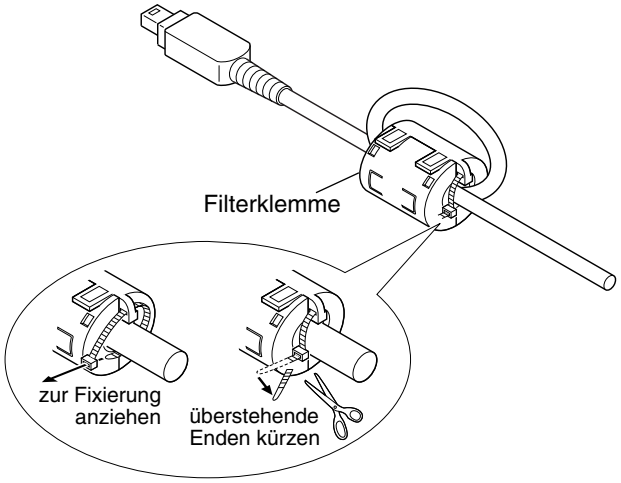
WARNUNG

DAMIT DER SPEICHERINHALT NACH DEM AUSSCHALTEN ERHALTEN BLEIBT, ENTHÄLT DIESES GERÄT EINE LITHIUMBATTERIE. DIESE BATTERIE DARF NUR DURCH EINEN AUSREICHEND QUALIFIZIERTEN SERVICETECHNIKER AUSGETAUSCHT WERDEN.
WENDEN SIE SICH ZUM AUSTAUSCH DER BATTERIE AN IHREN FACHHÄNDLER ODER EINEN JVC-STÜTZPUNKT.

ACHTUNG

Filterklemme befestigen

Montieren Sie die beiliegende Filterklemme wie nachfolgend abgebildet an dem zum DM-NE300E weisenden Ende des DV-Kabels.



Netzspannung	220 V bis 240 V AC, 50 Hz/60 Hz
Stromaufnahme	0,5 A
Betriebsbedingungen	0°C bis 40°C (Kondenswasserbildung vermeiden)
Abmessungen	86 × 214 × 301 mm (ohne Bedienfeld und überstehende Teile)
Gewicht	2,8 kg

■ **Technische Daten und äußeres Erscheinungsbild können ohne vorherige Ankündigung geändert werden.**

Sonstinge Vorsichtsmaßnahmen

Diese Anlage steht in Übereinstimmung mit den Bestimmungen und Schutzanforderungen der anwendbaren EU-Richtlinien. Diese Anlage wurde für professionelle Videoanwendungen entwickelt und ist für den Einsatz in den folgenden Umgebungen vorgesehen:

- Wohnbereiche (im geschlossenen Raum)
- Handel und Leichtindustrie (z. B. Bürogebäude oder Theater)
- innerstädtische Freiluftbereiche

Für optimale Leistung und aus Gründen der elektromagnetischen Kompatibilität empfehlen wir die Verwendung von Kabeln, die folgende Längen nicht überschreiten:

Anschluss	Kabel	Länge
VIDEO OUT 1	KOAXIALKABEL (GESCHIRMT)	10 Meter
VIDEO OUT 2	S-KABEL (GESCHIRMT)	10 Meter
AUDIO OUT LEFT	CINCHKABEL (RCA, GESCHIRMT)	10 Meter
AUDIO OUT RIGHT	CINCHKABEL (RCA, GESCHIRMT)	10 Meter
DV 9V	DV-KABEL (GESCHIRMT)	4 Meter
LAN	CAT5 STP-KABEL	100 Meter
COM	D-SUB-KABEL (9-POLIG, GESCHIRMT)	10 Meter
AC IN (AC-NETZTEIL)	NETZKABEL	2,5 Meter

Der Einschaltstrom dieses Geräts beträgt 12,0 Ampere.

Achtung:

- Wenn in der Umgebung des Geräts starke elektromagnetische Wellen oder Magnetfelder vorhanden sind (z. B. in der Nähe von Radios, Funkeinrichtungen, TV-Sendern, Transformatoren, Motoren usw.), kann das Bild gestört sein. Verschieben Sie das Gerät in einem solchen Fall aus dem Einflussbereich der Störquelle.

Thank you for choosing
JVC's MPEG-2 network encoder
DM-NE300E.

Key Features

- PC is not required for basic operations.
- Video and audio that have been input are compressed in the MPEG-2 and MPEG-1 Layer II formats respectively and sent to the network (100BASE-TX).
- Optimal bitrate and video quality can be selected according to the network bandwidth.
  Preset bitrates can be selected on the front panel.
- DV input is possible from IEEE1394. Conversion from DV to MPEG-2 in digital is possible.
- RS232C/RS422 serial control pass-through terminal is equipped for control of external device such as video switcher.
- Standard network protocols compliant.
  Stream transmission and control are RTP and RTSP compliant. Multicast/Unicast is available. Sends/Receives serial control data via UDP.
- 2U half rack size. Mounting onto EIA rack is possible.
  (Use of a mount bracket (to be purchased separately) is required.)
- This encoder and decoder have some delay of audio/video due to the nature of the MPEG format.
  This equipment comes equipped with a Normal mode that gives priority to video quality, as well as a Low Delay mode to shorten delay time.

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1. Points To Note When Using This Equipment

- This encoder and decoder have some delay of audio/video due to the nature of the MPEG format.
- Freeze or noise of playback video/audio may occur due to network conditions. These are not caused by malfunction of the equipment.
- Be sure to enter standardized video signals into this equipment. This equipment may not function properly when connected to some devices.

  For VTRs, there may be cases where output signals may deviate from the standard during pause, stop, fast-forward or rewind. Playback video may temporarily freeze or turn black when such signals have been input.
- Switching between [RS232C/RS422] (P.5 - ㉑.) shall be performed with the power of this equipment turned off. Restoration using the Reset switch may be required if this is done when the equipment is on.
- Setting of the [VIDEO SELECT] switch (P.5 - ⑱.) shall be performed with the power of this equipment turned off. Noise interference may occur in video/audio if this is done when the equipment is on.
- Noise interference may occur in play back video or audio when altering bitrate. Pay attention to switching during use.
- Do not turn off the power when altering settings via browsers, Telnet or terminal software. Writing into nonvolatile memory is performed during alteration of settings. Data may lose its consistency if power is turned off during the process and failure may occur during startup.
- **NetBIOS of Windows-based Computer**

  When NetBIOS of Windows-based computers are enabled, broadcast packets may be sent regularly, which may occupy the network and lead to failure in stream transmission from this equipment as well as stream reception at the decoder. Disable NetBIOS when connecting Windows-based computers to the same LAN. To alter NetBIOS settings, right click on the 'Network Computer' icon on the Windows screen and select 'Properties'.
  (When NetBIOS is disabled, neighboring computers will not be shown even when the 'Network Computer' icon is clicked.)
- **Hub Selection**

  Use a switching hub instead of a shared hub. All packets may be sent to devices that are not specified as the destination if a shared hub is used. This may constrain the equipment's operation as the equipment and the decoder will need to perform additional processing to discard the unwanted packets.
- **Other Limitations to Enable Coexistence with Multicast**

  When in the multicast mode, multicast packets will reach all devices within the LAN even in a system that employs a switching hub. As a result, other network encoders will, during multicast transmission, send out voluminous amount of packets to this equipment, thus constraining the equipment's operation as it will need to perform additional processing to discard the unwanted packets.

  When performing multiple multicast in LAN, ensure that the total bitrate is set to 10 Mbps or less. For example, in the case of 2 multicasts, each shall be 5.0 Mbps or less. In the case of 3 multicasts, set the bitrate for each to 3.3 Mbps and below.

  IGMPv2 compliant network is strongly recommended to build a multicast system.
- **DV Input Terminal**

  The DV input on this equipment can only be used as AV input. It does not function as an output terminal.

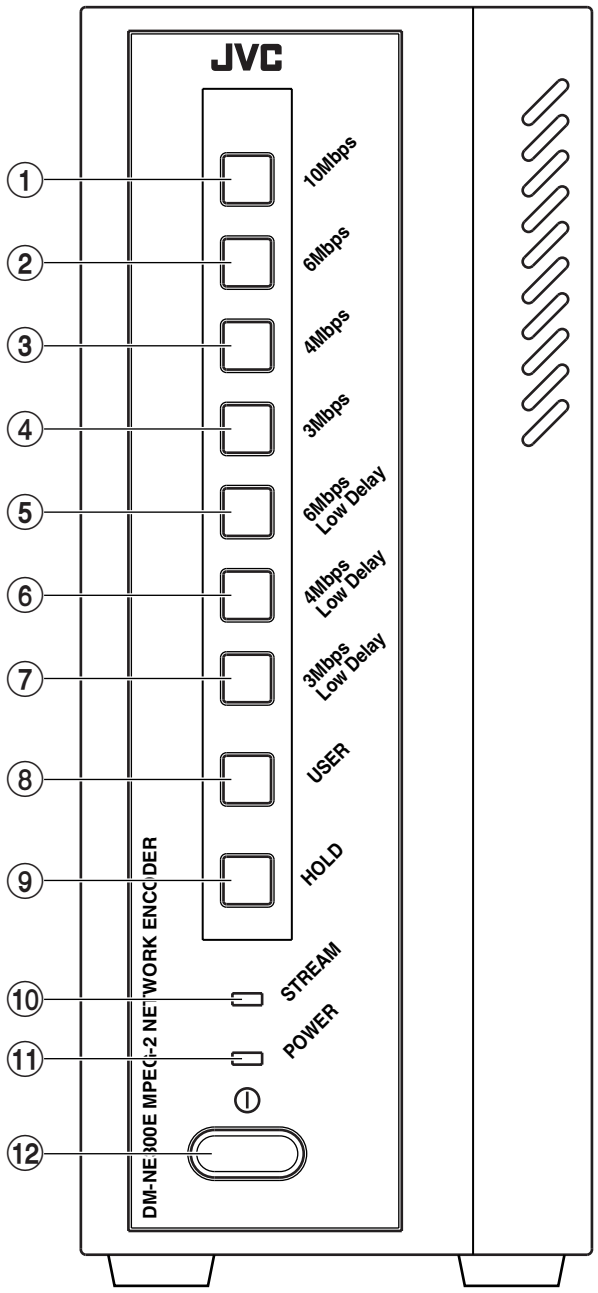
2. Check of Accessories / Bundled Items

Accessories/bundled items included with the network encoder are listed as follows. Check if there is any shortage and contact the sales outlet at which the purchase is made if necessary.

① Instruction Manual (This booklet) ..... x 1	④ Switch Plate ..... x 2
② Warranty Card ..... x 1	⑤ Clamp Filter ..... x 1
③ Power Cord (2.5m) ..... x 1	

3. Names and Functions

■ Front Panel



① [10 Mbps] Switch
To set output bitrate to 10 Mbps.
Lights up when selected.

② [6 Mbps] Switch
To set output bitrate to 6 Mbps.
Lights up when selected.

③ [4 Mbps] Switch
To set output bitrate to 4 Mbps.
Lights up when selected.

④ [3 Mbps] Switch
To set output bitrate to 3 Mbps.
Lights up when selected.

⑤ [6 Mbps Low Delay] Switch
To set bitrate to 6 Mbps Low Delay (low delay mode).
Lights up when selected.

⑥ [4 Mbps Low Delay] Switch
To set bitrate to 4 Mbps Low Delay (low delay mode).
Lights up when selected.

⑦ [3 Mbps Low Delay] Switch
To set bitrate to 3 Mbps Low Delay (low delay mode).
Lights up when selected.

⑧ [USER] Switch
To set to output bitrate of USER's preset value. Factory setting is at 1.5 Mbps Low Delay.
Lights up when selected.

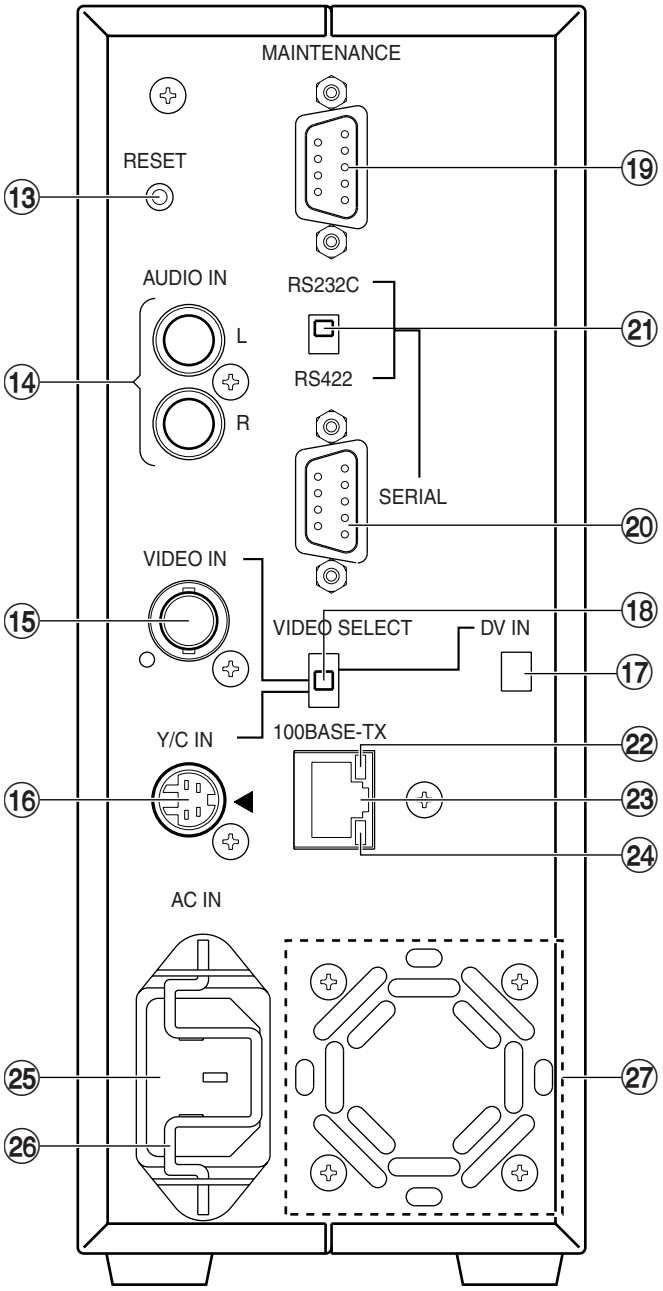
⑨ [HOLD] Switch
To lock/unlock the above switches.
Switches are locked when light is on. Press this button to unlock before operating the switches.
Light turns off when unlocked.
The above switches will be automatically locked if left unoperated for 10 seconds.

⑩ [STREAM] LED
Lights up when stream is transmitted from this equipment to network.

⑪ [POWER] LED
Green light turns on when power in [ON].

⑫ Power Switch
Power switch. Depress till a 'click' sound is heard.

■ Rear Panel



- Set up this equipment near a power point.
- Unplug the equipment from the power point or remove power cord from the AC inlet (AC IN) of this equipment to cut off power completely.

※ Fasten by attaching the switch plates supplied after setting items ⑱ and ㉑.
This shall be performed by the sales outlet at which this equipment is purchased.

⑬ [RESET] Switch
Use a pointed object to depress button.
This equipment will be reset.

⑭ [AUDIO IN] Input Terminals
Analog audio input terminals.
Disabled when DV IN terminal is used.

⑮ [VIDEO IN] Terminal
Video (Composite) input terminal. Set the ⑱ [VIDEO SELECT] Switch at the center when using this as the input terminal.

⑯ [Y/C IN] Terminal
Video (Y/C) input terminal. Set the ⑱ [VIDEO SELECT] Switch at the lower end when using this as the input terminal.

⑰ [DV IN] Terminal
DV input terminal. Set the ⑱ [VIDEO SELECT] Switch at the upper end when using this as the input terminal.

⑱ [VIDEO SELECT] Switch
To select either DV, Composite or Y/C as video input. Set to [DV IN], [VIDEO IN] or [Y/C IN] accordingly depending on the signal to be used.
Turn 'OFF' the power of this equipment when operating this switch.

⑲ [MAINTENANCE] Switch
This terminal is used only for servicing purposes.

⑳ [SERIAL]
Serial terminal for controlling external device.

㉑ [RS232C/RS422] Selector Switch
This switch sets the signal format of ⑳ [SERIAL] to either RS232C or RS422.
Turn 'OFF' the power of this equipment when operating this switch.

㉒ [LINK] LED
Lights up when this equipment is connected to a network.

㉓ [100BASE-TX] Terminal
100BASE-TX terminal. Output terminal for MPEG-2 stream.

㉔ [RXD] LED
Lights up when this equipment receives packet via 100BASE-TX.

㉕ AC IN
AC 220 V~240 V inlet. Ensure to use the power cord supplied for connection.
Make sure to earth the equipment. Do so before inserting the plug to the power source. When removing the earth, do so after unplugging from the power source.

㉖ Fastener
Plug in the supplied power cable, and fasten using the fastener.

㉗ Vent Outlet

4. How To Operate

This equipment stores changed settings and hence the same operation prior to turning off can be performed by just turning on the power.
Setting need not be performed every time when turning on the power.

① Turn [ON] the power switch on the front panel.
The [POWER] LED and [USER] button will light up in green.

② Wait for about 20 seconds for it to be activated.
Upon activation, the [HOLD] button and other buttons that have been used prior to turning off will light up in green.
※ The [USER] button will light up in green when bitrates are set using a PC.

③ Equipment activated.
Control of front panel settings and setting via PC as well as control from the decoder are enabled.

5. Front Panel Settings

Other than the front panel settings, **DM-NE300E** can be set via:
1. Browser on the computer (P.11)
2. Terminal software on the computer (P.23)
3. Telnet on the computer (P.28)

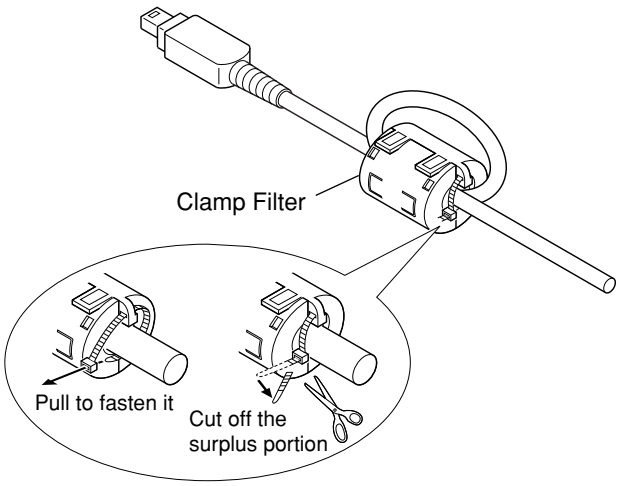
Details on the above methods of setting are described in P.11and subsequent pages.

Setting Using Switches on the Front Panel

Bitrate can be selected on the front panel. Bitrates and delay modes are preset for each button.
① Unlock by depressing the HOLD switch. (Light on HOLD button will turn off.)
② Select the appropriate setting switch.
③ Lock by depressing the HOLD switch. (Locks automatically after about 10 seconds when left untouched.)

6. Attaching Clamp Filter

Attaching the supplied clamp filter to one end of DV cable which is near DM-NE300E as shown in the figure below.



7. Specifications

Compression format	Video	ISO/IEC13818-2 (MPEG-2 VIDEO) Compression: MPEG-2 Video format: 480 i Frame size: 720 X 576 (normal: 4.51~13.5 Mbps,low delay: 7.21~13.5 Mbps) 544 X 576 (normal: 2.70~4.33 Mbps,low delay: 4.06~6.76 Mbps) 352 X 576 (normal: 1.08~2.40 Mbps,low delay: 1.08~3.76 Mbps) Frame rate: 25 Hz Bitrate: CBR (38 options are available)
	Audio	ISO/IEC11172-3 (MPEG-1 Layer II Audio) Compression: MPEG-1 layer II Bitrate: Stereo 192 kbps Sampling rate: 48 kHz
Video input		Composite Video BNC/75 Ω x 1 Y/C signal S terminal x 1
Audio input		Analog audio 2 Vrms RCA pin x 2(LR)
DV input		DV input DV terminal x 1
Network interface		100 BASE-TX RJ-45 x 1
External control		RS232C/RS422 D-sub9Pin (male) x 1
Maintenance		RS-232C D-sub9Pin (female) x 1
Stream control		RTSP/TCP/IP, manually
Stream output		100 BASE-TX RTP/UDP/IP, unicast/multicast Output rate: 1.08 Mbps~13.5 Mbps Output format: MPEG-2 Transport Stream (ISO/IEC13818-1) TS packet size: 188 byte
Power supply		AC 220 V~240 V 50 Hz/60 Hz
Current consumption		0.5 A
Operating environment		0 °C~40 °C (Non- dew condensation)
External dimensions		86 mm x 214 mm x 301 mm (excluding terminal and protuberance)
Weight		2.8 kg

■ **Design and specifications are subject to change for improvement without prior notice.**

8. Caution for Cables

This equipment is in conformity with the provisions and protection requirements of the corresponding European Directives. This equipment is designed for professional video appliances and can be used in the following environments:

- Residential area (in houses)
- Commercial and light industry; e.g. offices or theaters
- Urban outdoors

In order to keep the best performance and furthermore for electromagnetic compatibility we recommend to use cables not exceeding the following lengths:

Port	Cable	Length
VIDEO IN	SHIELDED COAXIAL CABLE	10 meters
Y/C IN	SHIELDED S CABLE	10 meters
AUDIO IN L	SHIELDED RCA PIN CABLE	10 meters
AUDIO IN R	SHIELDED RCA PIN CABLE	10 meters
DV IN	SHIELDED DV CABLE	4 meters
100BASE-TX	CATEGORY 5, TWIST PAIR, SHIELDED CABLE	100 meters
SERIAL	SHIELDED 9PIN D-SUB CABLE	10 meters
AC IN	AC POWER CABLE	2.5 meters

The inrush current of this apparatus is 3.4 amperes.

Caution:

- Where there are strong electromagnetic waves or magnetism, for example near a radio or TV transmitter, transformer, motor, etc., the picture may be disturbed. In such a case, please keep the apparatus away from the sources of the disturbance.

9. Factory Settings

Switch Settings

Item	Factory Setting	Supplementary Note
Front Panel Setting	3 Mbps	Normal Mode: 3 Mbps
Power Switch	OFF	
SERIAL	RS232C	
VIDEO SELECT	VIDEO IN	Composite Input selected

USER Button Settings

Item	Factory Setting	Supplementary Note
TS Rate	1.5 Mbps	
Low Delay	Low	Low Delay Mode
Audio	ON	Audio Stream available

Software Settings

Item	Factory Setting	Supplementary Note
IP Address	10.0.0.1	
Subnet Mask	255.0.0.0	
Default Gateway Address	NIL	
Bitrate	3 Mbps	
Low Delay	Normal	Normal Mode selected
Audio	ON	Audio Stream available
Auto Start	Normal	Manual Start selected
Unicast/Multicast Mode	Unicast	Unicast Mode selected
Multicast Stop Mode	Stopped when all decoders stop	‘When all decoders stop’ selected
Multicast IP Address	225.0.1.1	
Multicast Port Number	3000	
Serial Port Baudrate	9600 bps	
Data Length	8	
Parity	None	
Stop Bit	1	
Flow Control	None	
Destination IP Address	10.0.0.100	
Destination Port Number	1052	

10. Saving Energy

Turn off the power when not in use to save energy.

11. Others

Be sure to get the sales outlet at which this equipment is purchased to mount the equipment.

All brand names and product names in this instruction manual are trademarks or registered trademarks of their respective companies.

1. **All rights are reserved with regard to a portion or the entire manual.**
2. **Contents of this booklet may be altered without any prior notice.**
3. **Our company shall not be responsible for any eventualities arising from the operation of this equipment.**
4. **Photos and diagrams are enlarged, omitted or composited to ease explanation, and may slightly differ from the actual item.**

12. More Details on Settings

Please consult the sales outlet at which this equipment is purchased on the operating environment of computers required for setting.

Note: Be sure to perform thorough checks when altering preset values, particularly network-related settings. Browser and Telnet connections may fail and system may not operate normally if there are errors in the settings.

12.1 Setting via Browser on the Computer

Note: Please refer to computer's instruction manual for setting of the computer.
Screen may not be properly displayed depending on the version of OS or browser used, but this will not affect the operation of the equipment.

12.1.1 Connection with Computers

(1) Connection

Connect **DM-NE300E** to the computer via network. Execute the ping command to check if network connection between the computer and **DM-NE300E** is successful. For example, if the IP address of **DM-NE300E** is 10.0.0.1, then enter

ping 10.0.0.1

upon starting up the command prompt at the computer. A few lines of response from **DM-NE300E** as shown below will be displayed if the connection is successfully established:

Reply from 10.0.0.1: bytes=32 time<10ms TTL=64

Timeout will be displayed if the connection is not established.

Request timed out.

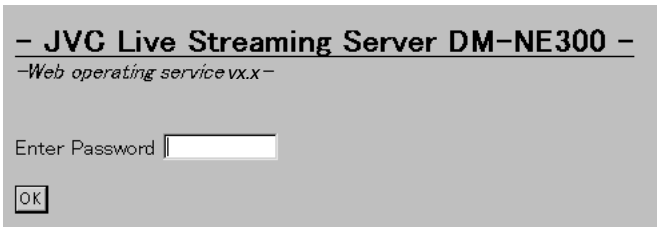
Note: Factory settings of IP address and subnet mask of DM-NE300E are 10.0.0.1 and 255.0.0.0 respectively.

(2) Starting Up Browser Software

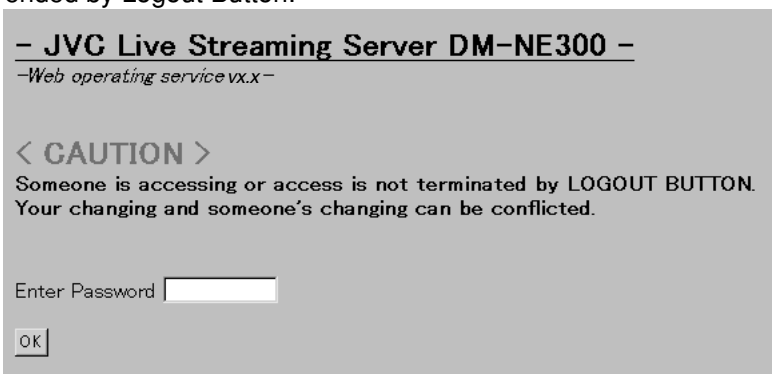
Start up the Internet Explorer (Version 5.5 or later) on the computer, followed by entering **DM-NE300E**'s IP address (URL) in the URL input field. For example, if the IP address of **DM-NE300E** is 10.0.0.1, then key in the URL http://10.0.0.1 and press Enter. The top page will be displayed on the browser. (If the top page is not displayed, check if the URL entered is correct.)

ON shall be selected for the item 'Automatically check for Internet Explorer Update' under Details of Internet Options in the Tools menu of the Internet Explorer.

Note: The x.x of vx.x shown on the screen indicates the software's version.



The following top page will be displayed when the equipment is currently accessed by someone or when previous access has not ended by Logout Button:


- JVC Live Streaming Server DM-NE300 -
-Web operating service vx.x-
< CAUTION >
Someone is accessing or access is not terminated by LOGOUT BUTTON.
Your changing and someone's changing can be conflicted.
Enter Password
OK

12.1.2 Top Page (Enter Password)

Enter password and click OK.

Note: Initial setting for the password is the 8-letter "password".

Change of password is recommended for security reasons. To change the password, refer to the page on password alteration.

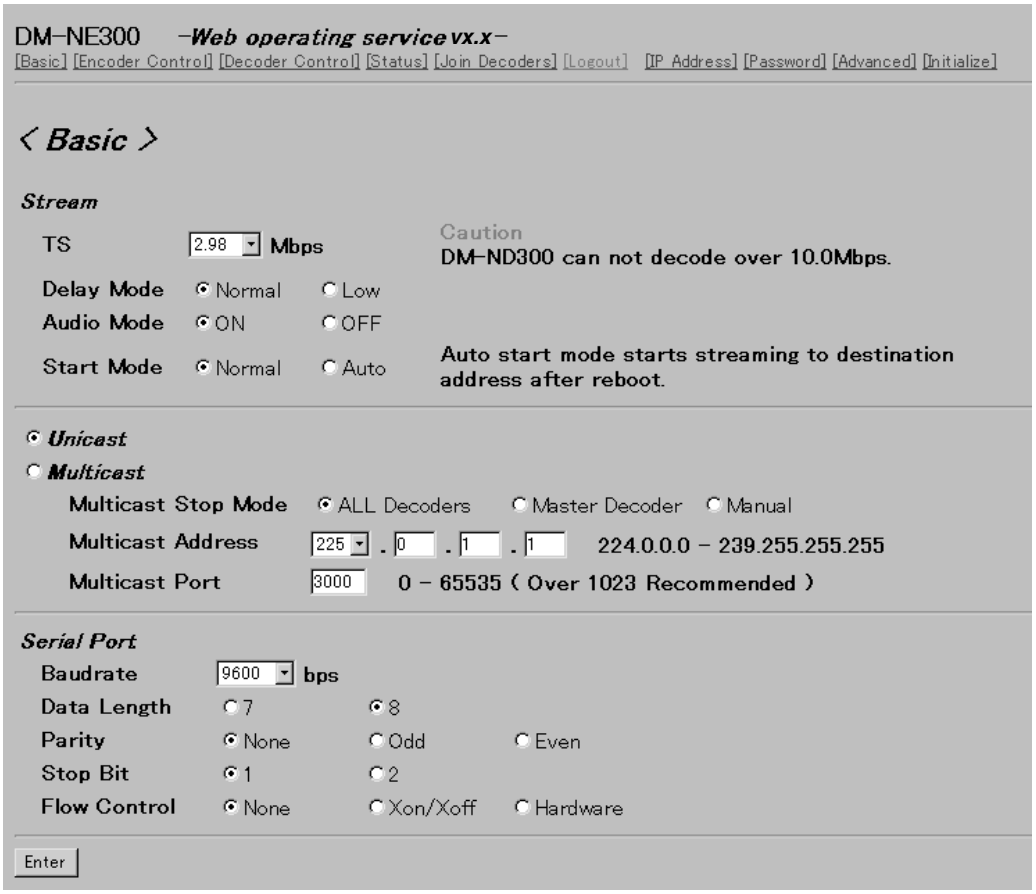
The Basic page will be displayed if the password is correctly entered.

If the password is incorrect, a warning message will be displayed. Return to the previous page of the browser to re-enter the correct password.

Note: Timeout is set for access via browsers for security reasons. Access from any page of the browser will be disabled by timeout after 1 hour has lapsed since the last setting. In this case, re-enter password at the top page.

12.1.3 Basic (Basic Settings)

Current parameters are displayed on this page and these can be altered at the same time. To make alterations, select or enter a value, followed by clicking the Enter button on the bottom left. Links to other pages are located on the uppermost portion of the page.


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Basic >
Stream
TS 2.98 Mbps
Caution
DM-ND300 can not decode over 10.0Mbps.
Delay Mode Normal Low
Audio Mode ON OFF
Start Mode Normal Auto
Auto start mode starts streaming to destination address after reboot.
Unicast
Multicast
Multicast Stop Mode ALL Decoders Master Decoder Manual
Multicast Address 225 . 0 . 1 . 1 224.0.0.0 - 239.255.255.255
Multicast Port 3000 0 - 65535 (Over 1023 Recommended)
Serial Port
Baudrate 9600 bps
Data Length 7 8
Parity None Odd Even
Stop Bit 1 2
Flow Control None Xon/Xoff Hardware
Enter

When entry is correct

DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
New parameters are accepted.

When entry is incorrect

The Basic screen will be displayed again.

TS (Bitrate)

For selecting bitrate of MPEG-2's TS (Transport Stream). A total of 38 options are available within the range of 1.08 ~ 13.5 Mbps. Reception via **DM-ND300E** decoder is possible for bitrates at 10 Mbps or below.
Although **DM-NE300E** is able to transmit data of higher rates, **DM-ND300E** is unable to decode them. Higher rates than 10 Mbps can be used, for instance, to capture streams in files on the computer.

Delay Mode

Normal or Low Delay can be selected. Normal mode is an encoding method that gives priority to video quality, while Low Delay mode gives priority to shorten delay time.

Audio Mode

ON or OFF can be selected. Audio bitrate is 192 kbps when the Audio mode is ON. When Audio mode is OFF, the bitrate is assigned to video to enhance the video quality.

Start Mode

Normal or Auto can be selected. When Auto is chosen, data transmission will automatically start upon turning on the power of **DM-NE300E**. When Normal is selected, data transmission starts upon access by the decoder or by using the button on the encoder control page.

Unicast / Multicast

Data transmission/reception is carried out with one encoder and one decoder in unicast. Multicast, on the other hand, allows data to be transmitted to multiple decoders at one time. To perform multicast transmission, select the Multicast mode.

Multicast Stop Mode

All Decoders, Master Decoder or Manual can be chosen. When All Decoders is selected, multicast transmission stops when all decoders participating in the multicast stop receiving data. When Master Decoder is selected, multicast stops when the first decoder to start receiving data (Master Decoder) stops its reception. When Manual is selected, multicast transmission does not stop even when all decoders participating in the multicast stop receiving data. In this case, use the button on the stream control page or type in command to stop data transmission.

Multicast Address

Enter 4 integral values for the IP address to be used for multicast. Select values between 224.0.0.0 and 239.255.255.255. Over 225.0.1.1 is recommended. When using multiple encoders for multicast, specify separate multicast address for each encoder.

Multicast Port

Select a port number between 0 and 65535. Numbers below 1023 may be used by various protocols. Values above 1024 are recommended.

Serial Port Baudrate

Select any of the following:
110 / 134 / 150 / 200 / 300 / 600 / 1200 / 2400 / 3600 / 4800 / 7200 / 9600 / 19200 / 31250 / 38400

Data Length (of Serial Port)

Select 7 or 8.

Parity (of Serial Port)

Select none, odd or even.

Stop Bit (of Serial Port)

Select 1 or 2.

Flow Control (of Serial Port)

Select None, Xon/Xoff or Hardware.

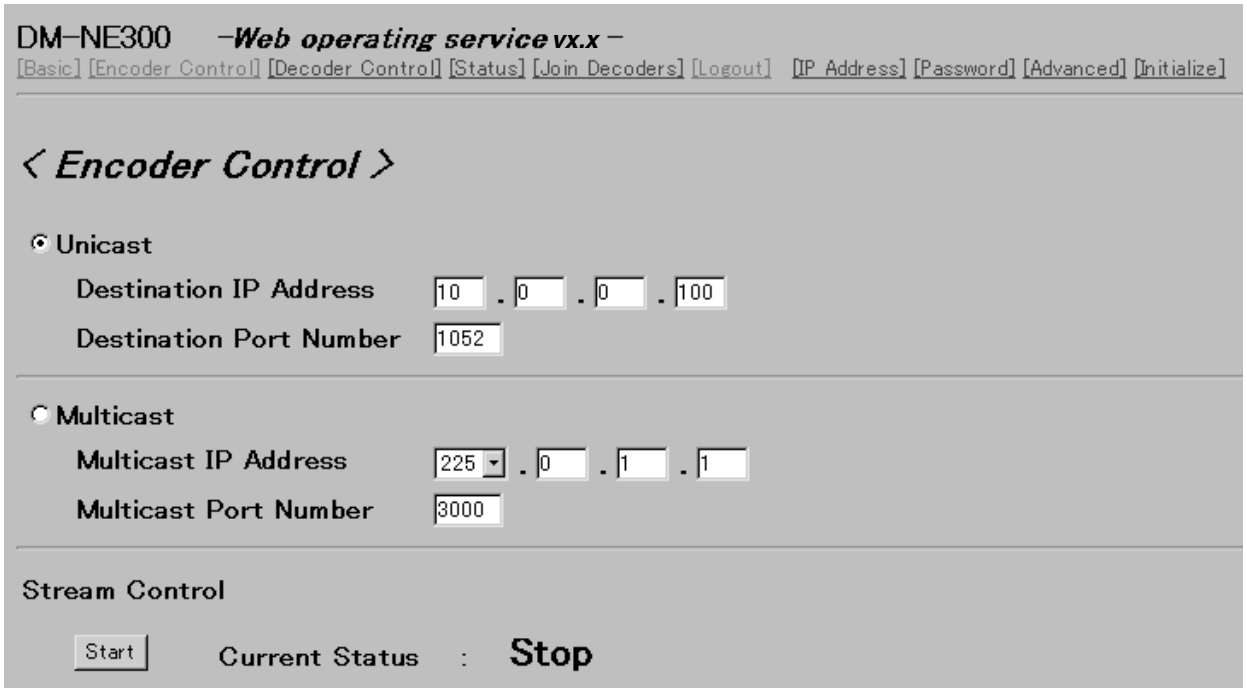
12. More Details on Settings

12.1.4 Encoder Control (Manual Operation of Stream Transmission)

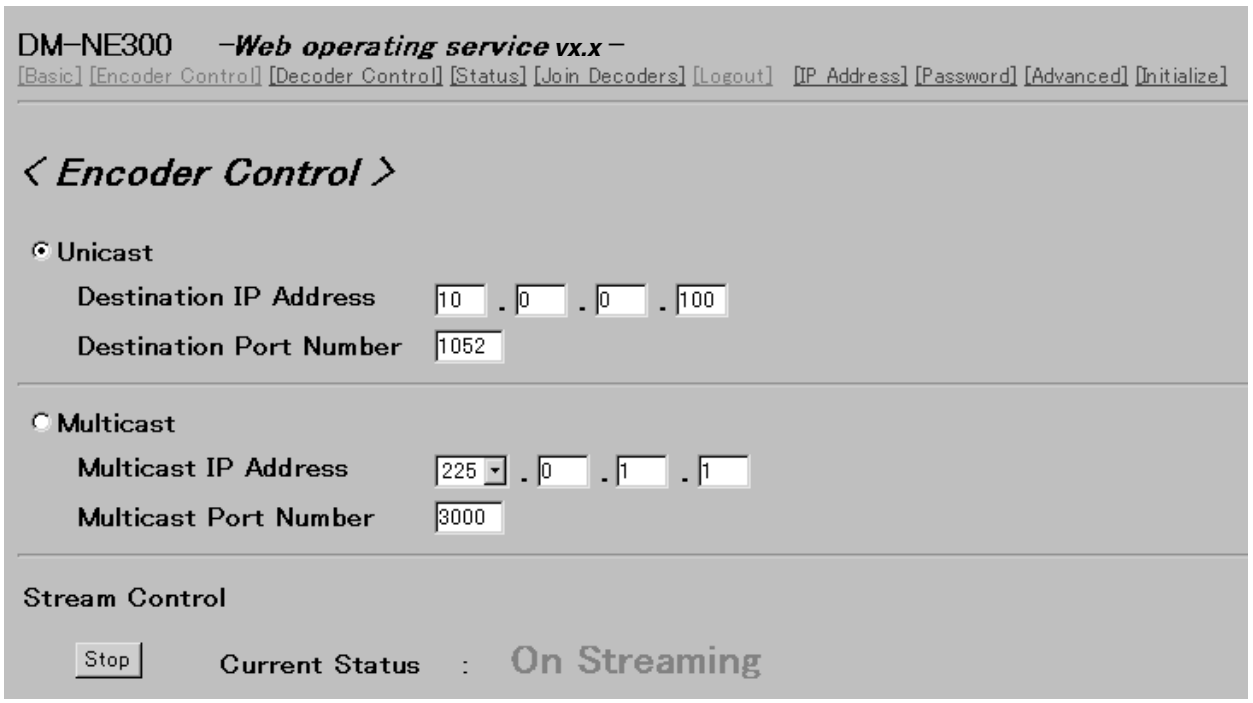
Stream transmission can be controlled at this page. When transmitting/receiving data with the **DM-ND300E** decoder, **DM-ND300E** controls **DM-NE300E** using the RTSP protocol. In this page, data can be transmitted manually without using the decoder. This is used for capturing stream in files by sending it to the PC.
Firstly, select either Unicast or Multicast. When Unicast is selected, only one destination is allowed. When Multicast is chosen, data can be transmitted to multiple destinations.

- **Destination IP Address (Unicast Destination IP Address)**
  Specify destination IP address for transmission by unicast using 4 decimal integers.
- **Destination Port Number (Unicast Destination Port Number)**
  Specify the destination port number between 0 and 65535. Numbers below 1023 may be used by various protocols. Values above 1024 are recommended.
- **Multicast Address (Multicast Destination IP Address)**
  Specify multicast IP address for transmission by multicast using 4 decimal integers.
- **Multicast Port Number (Multicast Destination Port Number)**
  Specify the destination port number between 0 and 65535. Numbers below 1023 may be used by various protocols. Values above 1024 are recommended.
- **Stream Control (Stream Transmission Control)**
  Press the Start button to start transmission. Stop button is displayed during transmission. Press the Stop button to stop transmission.

Note: Change settings only in the Stop mode.


DM-NE300 -Web operating service vx.x -
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Encoder Control >
Unicast
Destination IP Address 10 . 0 . 0 . 100
Destination Port Number 1052
Multicast
Multicast IP Address 225 . 0 . 1 . 1
Multicast Port Number 3000
Stream Control
Start
Current Status : Stop

Screen During Transmission


DM-NE300 -Web operating service vx.x -
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Encoder Control >
Unicast
Destination IP Address 10 . 0 . 0 . 100
Destination Port Number 1052
Multicast
Multicast IP Address 225 . 0 . 1 . 1
Multicast Port Number 3000
Stream Control
Stop
Current Status : On Streaming

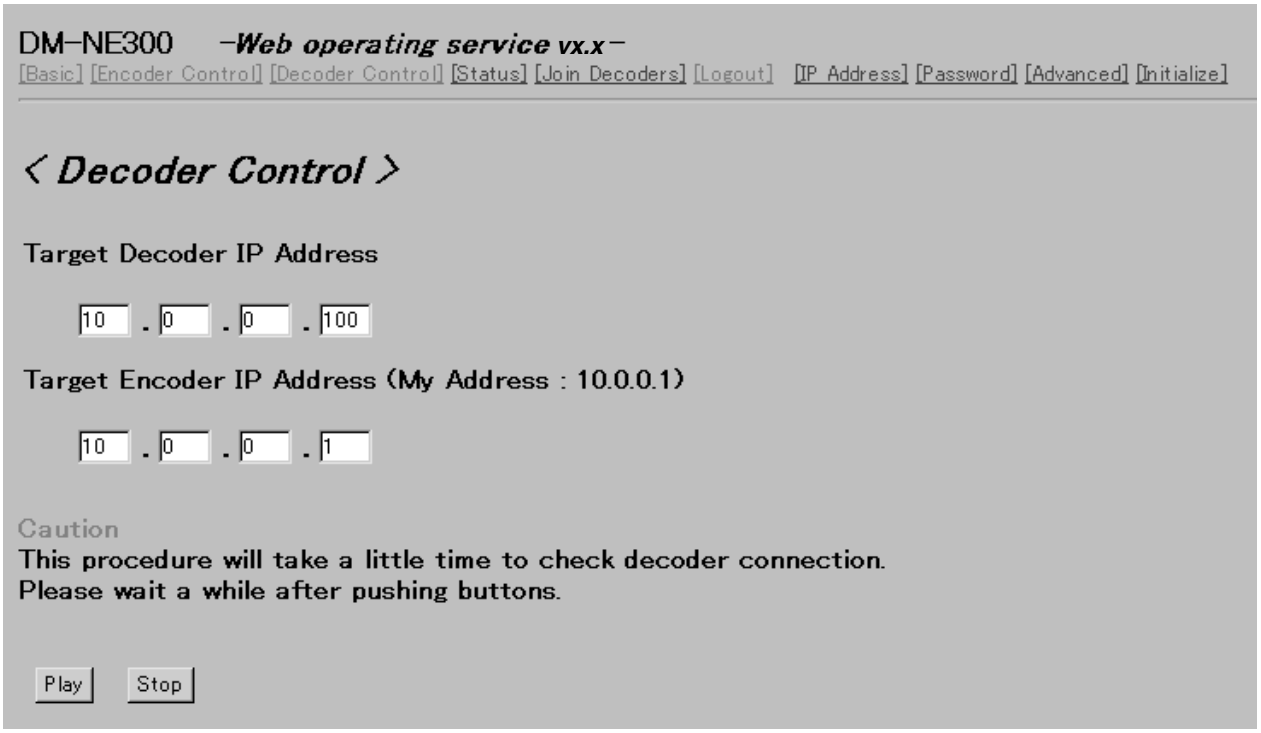
Screen when destination IP address does not respond to Ping in the Unicast mode

DM-NE300 -Web operating service vx.x -
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
No response from decoder IP Address.

12.1.5 Decoder Control

The **DM-ND300E** decoder is usually operated using the remote controller for it to access this equipment. Operation of the **DM-ND300E** decoder using this equipment to start play back is possible at this page. Forced access to another encoder is also possible even if the decoder is currently in the process of data transmission with other encoders.

In addition, encoder to be accessed by the decoder is not restricted to the **DM-NE300E** that is currently being accessed via the browser. Other **DM-NE300E**s can also be accessed. In other words, Play/Stop can be performed for any random decoder/encoder combination.


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Decoder Control >
Target Decoder IP Address
10 . 0 . 0 . 100
Target Encoder IP Address (My Address : 10.0.0.1)
10 . 0 . 0 . 1
Caution
This procedure will take a little time to check decoder connection.
Please wait a while after pushing buttons.
Play
Stop

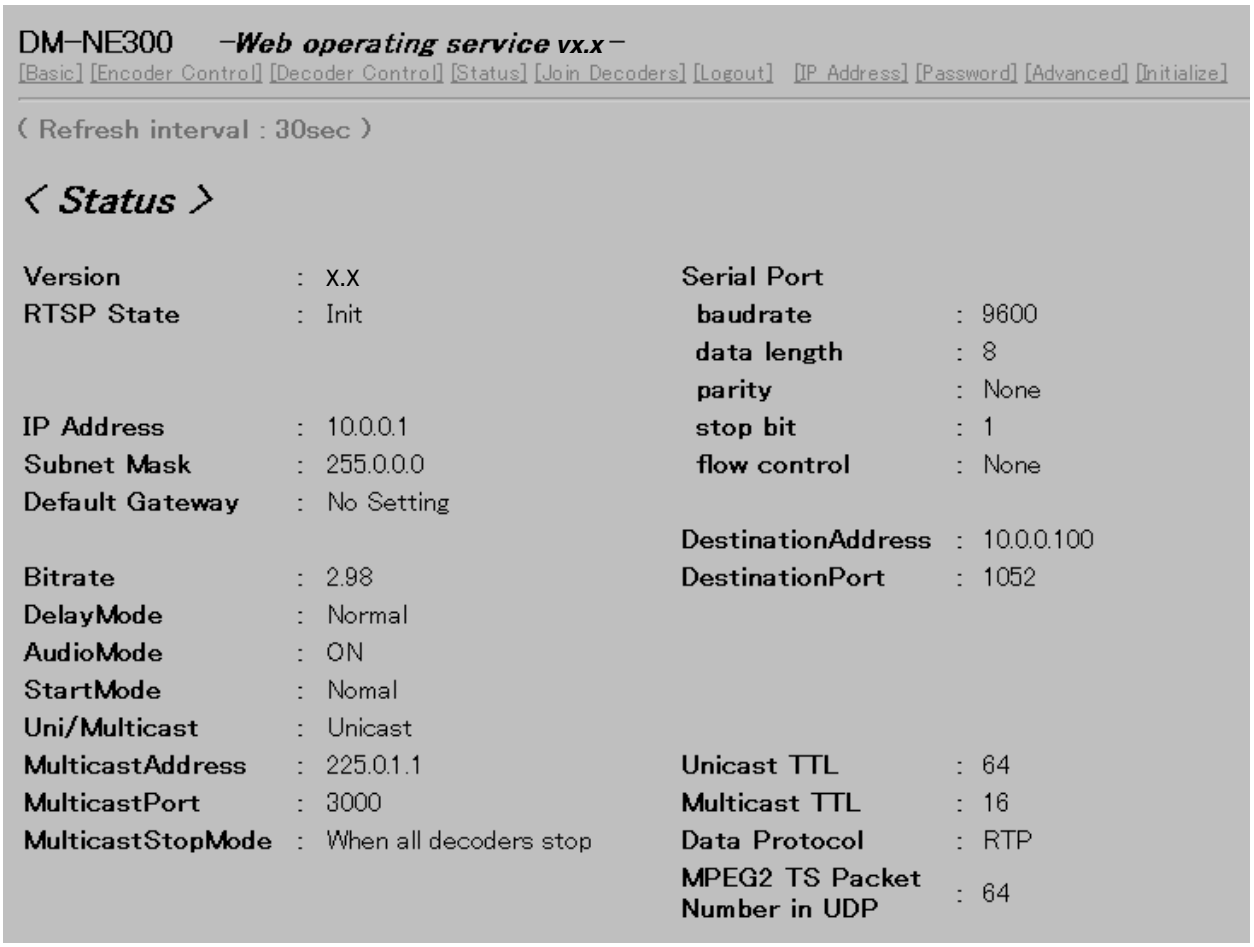
Screen when decoder does not respond to Ping

DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
No response from decoder IP Address.

- **Target Decoder IP Address**
  Enter the IP address for the **DM-ND300E** decoder for which Play/Stop is to be performed.
- **Target Encoder IP Address**
  Enter the IP address of the **DM-NE300E** encoder to be accessed by the decoder. IP address of the **DM-NE300E** currently accessed via the browser is automatically specified during the initial state.
- **Play/Stop Button**
  Performs Play/Stop functions on decoder/encoder combinations for which IP addresses are specified. Press the Play to send command to the specified decoder. Decoder will access the specified encoder and encoder will start stream transmission if the command is successfully received. Press the Stop button to stop the decoder. Go to the Joining Decoders page of the specified encoder to check whether the decoder control has succeeded.

12.1.6 Status (Status Display)

This page displays status information such as current settings. (Updated every 30 seconds)


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
(Refresh interval : 30sec)
< Status >
Version : X.X
RTSP State : Init
IP Address : 10.0.0.1
Subnet Mask : 255.0.0.0
Default Gateway : No Setting
Bitrate : 2.98
DelayMode : Normal
AudioMode : ON
StartMode : Nomal
Uni/Multicast : Unicast
MulticastAddress : 225.0.1.1
MulticastPort : 3000
MulticastStopMode : When all decoders stop
Serial Port
baudrate : 9600
data length : 8
parity : None
stop bit : 1
flow control : None
DestinationAddress : 10.0.0.100
DestinationPort : 1052
Unicast TTL : 64
Multicast TTL : 16
Data Protocol : RTP
MPEG2 TS Packet Number in UDP : 64

12.1.7 Joining Decoders (List of Joining Decoders)

Displays the IP address of the decoder that is decoding the bit stream of this equipment.
(Display of decoder currently in the decoding process is updated every 30 seconds)

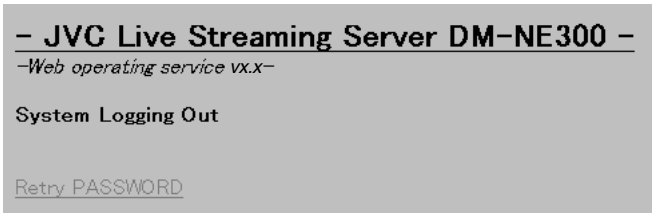
DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
(Refresh interval : 30sec)
< Join Decoders >
Joining Decoder(s) : 10.1.16.96
10.1.16.98

12.1.8 Logout (Logout Page)

Ends access to this equipment via the browser.

DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Logout >
Browser is expired by logout.
Logout

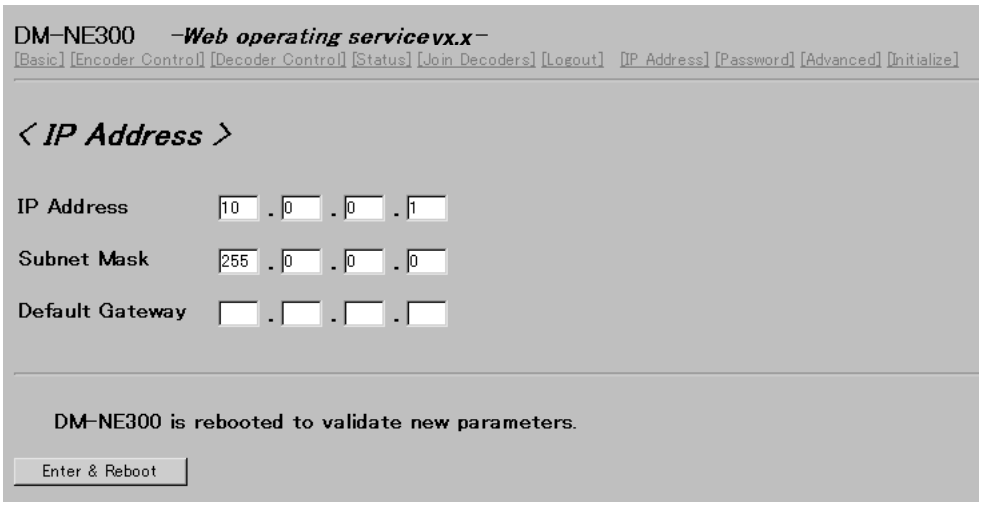
Logout Execution Screen



Multiple parties can gain access to this equipment via the browser at one time. A warning message will be displayed on top page if someone else is currently accessing the equipment. Alteration of settings by multiple parties is not advisable as this may give rise to confusion. If the browser is closed without logging out, web server of this equipment will remain active until timeout, and warning messages will be sent to others who subsequently access the equipment. The equipment will be informed immediately that access via the browser has ended once logging out is performed.
Ensure to log out after use .

12.1.9 IP Address (Network Address Setting)

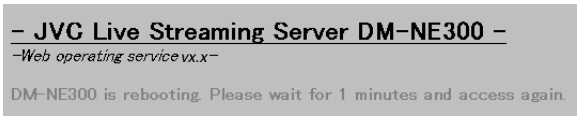
When parameters displayed in this page are altered, **DM-NE300E** will need to be rebooted. Upon alteration of parameters, the Confirmation screen will be displayed upon clicking the Enter&Reboot button. By clicking the Enter&Reboot button on the Confirmation screen, parameters are sent to **DM-NE300E** and **DM-NE300E** is rebooted. About 20 seconds are required for restarting. Enter the encoder's new IP address in the URL input field to re-establish connection from the browser. You may need to change IP address/Subnet mask/Default gateway of your PC to connect to the **DM-NE300E** that has new IP address/Subnet mask/Default gateway.


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< IP Address >
IP Address 10 . 0 . 0 . 1
Subnet Mask 255 . 0 . 0 . 0
Default Gateway . . .
DM-NE300 is rebooted to validate new parameters.
Enter & Reboot

Confirmation Screen

DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< IP Address Setting Status >
IP Address : 10.0.0.1
Subnet Mask : 255.0.0.0
Default Gateway : No Setting
Are you sure ?
Enter & Reboot

Reboot Execution Screen


- JVC Live Streaming Server DM-NE300 -
-Web operating service vx.x-
DM-NE300 is rebooting. Please wait for 1 minutes and access again.

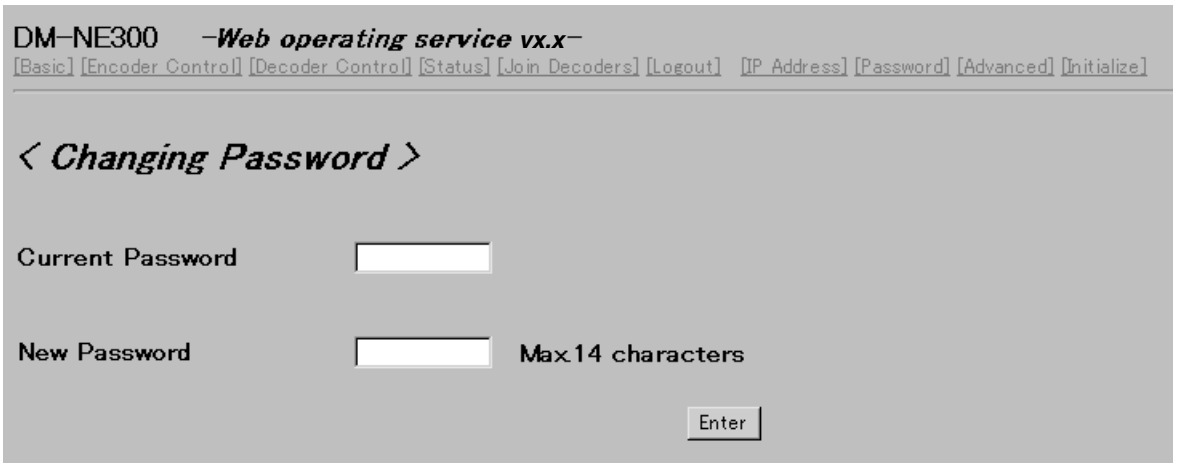
- **IP Address (Self IP Address)**
  Use this to alter the IP address of **DM-NE300E**. Enter 4 decimal integers. Self IP address column cannot be left unfilled.
- **Subnet mask**
  Enter 4 decimal integers as well for subnet mask.
  Note: Factory settings of IP address and subnet mask are 10.0.0.1 and 255.0.0.0 respectively.
- **Default Gateway**
  Use this to specify the default gateway. Enter 4 decimal integers for the default gateway IP address. Leave as blank if default gateway is not to be specified.
  The IP address page will be displayed again if entry is incorrect. Re-enter the correct values.

Note: Connection with the browser is disconnected once rebooted. To continue operation via the browser, establish connection with the browser again. Upon alteration of IP address, wait for 20 seconds, followed by specifying the new IP address and re-establishing the connection.

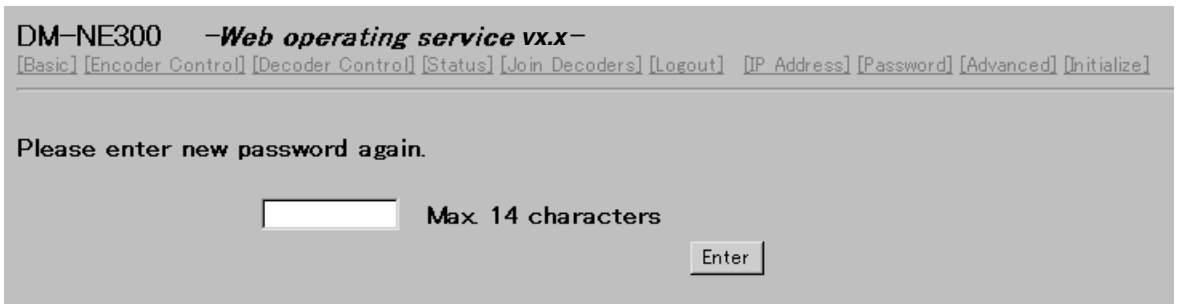
12. More Details on Settings

12.1.10 Password Alteration Page

Password entered at the top page can be altered here. Enter the current and new passwords and click the Enter button. A screen requesting for re-entry of password will be displayed. Re-enter the new password. Maximum number of characters for the password is 14 alphanumeric characters (case sensitive).


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Changing Password >
Current Password
New Password
Max.14 characters
Enter

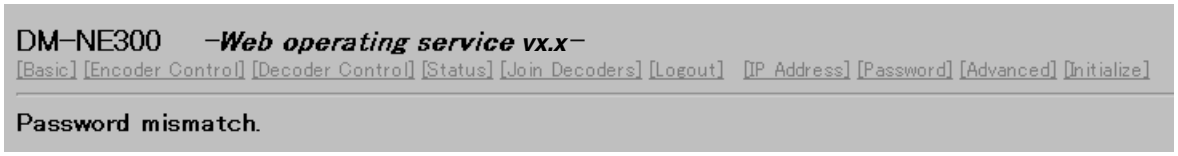
Re-enter Password Screen


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
Please enter new password again.
Max. 14 characters
Enter

Password Alteration Completed Screen

DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
Password is changed.

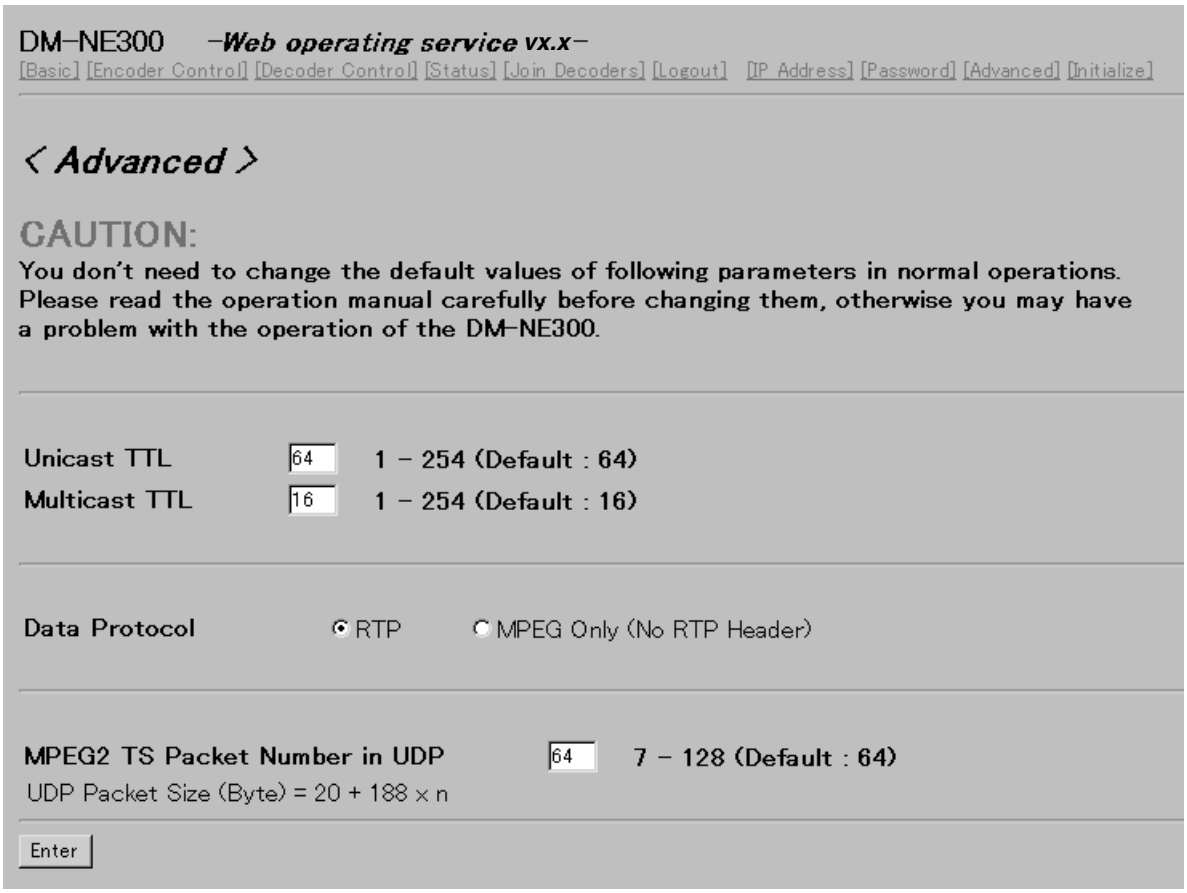
Password Alteration Incomplete Screen


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
Password mismatch.

Make sure not to forget the new password upon alteration. Otherwise, access via browsers will be denied.

12.1.11 Advanced (Advanced Settings)

Parameters used under special conditions can be altered at this page. To alter parameters, select or enter the values and press the Enter button. Ensure that thorough understanding is gained prior to altering these parameters. There are cases where alteration may bring about failure in the normal decoding at **DM-ND300E**.


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Advanced >
CAUTION:
You don't need to change the default values of following parameters in normal operations.
Please read the operation manual carefully before changing them, otherwise you may have a problem with the operation of the DM-NE300.
Unicast TTL 64 1 - 254 (Default : 64)
Multicast TTL 16 1 - 254 (Default : 16)
Data Protocol RTP MPEG Only (No RTP Header)
MPEG2 TS Packet Number in UDP 64 7 - 128 (Default : 64)
UDP Packet Size (Byte) = 20 + 188 x n
Enter

- **Unicast TTL**
  Sets the TTL (Time to Live) for unicast. TTL indicates how many times a packet can pass through routers. Factory setting is 64.
  Factory setting need not to be changed under usual circumstances. Increase the value if there are problems passing through routers. Value can be specified between 1 and 254.
- **Multicast TTL**
  Sets the TTL for multicast. Appropriate values can be set for the multicast packets to pass through routers. Factory setting is 16.
  Factory setting need not to be changed under usual circumstances. Increase the value if there are problems passing through routers. Value can be specified between 1 and 254.
- **Data Protocol (Protocol Storing Data)**
  Protocol for storing MPEG-2 data in UDP packet can be selected. RTP is selected in the factory settings. If MPEG Only is selected, RTP header will not be added and only MPEG data will be stored in UDP payload. Ensure to make use of RTP when decoding by **DM-ND300E**.
- **MPEG2 TS Packet Number (Number of MPEG-2 TS Packets Stored in UDP Packet)**
  Sets the number of MPEG-2 TS packets to be stored in UDP payload. The larger the number of TS packets, the lesser the network overhead and hence lesser burden at the decoder in processing incoming data. However, UDP packets are divided into multiple IP fragments. Although burden of overhead and incoming data processing will be heavier with a smaller number of TS packets, UDP packets are not fragmentized. Therefore, reduce the number of TS packets when division into IP fragments is not desirable. The size of each MPEG-2 TS packet is 188 bytes. If the number of TS packets is set as 7, then each UDP packet will make up one Ethernet frame and hence become fragment-free. Factory setting is 64.
  Factory setting (64) is strongly recommended.

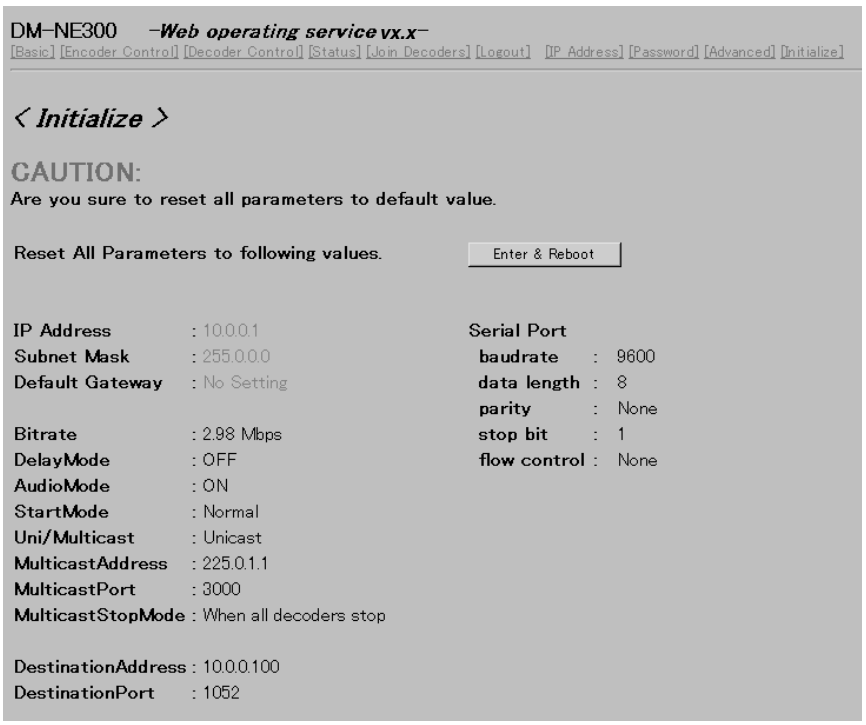
12.1.12 Initialize (Reset to Initial Factory Settings)

- **Reset to Initial Factory Settings**
  To restore all parameters to their factory settings. Parameters upon restarting will become values as displayed on this page. IP address becomes 10.0.0.1.

Note: This operation restores **DM-NE300E** network parameters to its factory settings and connection via previous network will be unavailable.

DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Initialize >
Reset All Parameters to following values.
Enter
IP Address : 10.0.0.1
Subnet Mask : 255.0.0.0
Default Gateway : No Setting
Bitrate : 2.98 Mbps
DelayMode : OFF
AudioMode : ON
StartMode : Normal
Uni/Multicast : Unicast
MulticastAddress : 225.0.1.1
MulticastPort : 3000
MulticastStopMode : When all decoders stop
DestinationAddress : 10.0.0.100
DestinationPort : 1052
Serial Port
baudrate : 9600
data length : 8
parity : None
stop bit : 1
flow control : None

Confirmation Screen


DM-NE300 -Web operating service vx.x-
[Basic] [Encoder Control] [Decoder Control] [Status] [Join Decoders] [Logout] [IP Address] [Password] [Advanced] [Initialize]
< Initialize >
CAUTION:
Are you sure to reset all parameters to default value.
Reset All Parameters to following values.
Enter & Reboot
IP Address : 10.0.0.1
Subnet Mask : 255.0.0.0
Default Gateway : No Setting
Bitrate : 2.98 Mbps
DelayMode : OFF
AudioMode : ON
StartMode : Normal
Uni/Multicast : Unicast
MulticastAddress : 225.0.1.1
MulticastPort : 3000
MulticastStopMode : When all decoders stop
DestinationAddress : 10.0.0.100
DestinationPort : 1052
Serial Port
baudrate : 9600
data length : 8
parity : None
stop bit : 1
flow control : None

12.2 Setting via Terminal Software on the Computer

Note: Please refer to the computer's instruction manual for setting of the computer.

12.2.1 Connection with Computers

(1) Connection

Connect the D-sub 9-pin terminal at the **DM-NE300E** for maintenance purposes to the COM port on the PC using a crossing cable. The terminal for maintenance is female.

Note: If the PC is started with the RS232C for maintenance purposes connected, **DM-NE300E** may be rebooted depending on the PC OS used. Do not connect RS232C until the PC has completely started up.

(2) Starting Up Terminal Software

Start up the terminal software at the PC. In the case of Windows-based PCs, for example, select Start → Program → Accessories → Hyper Terminal. Set terminal software as follows:

Baud Rate: 19200 bps
Data Length: 8 bits
Parity: None
Stop Bit: 1 bit
Flow Control: None

(3) DM-NE300E Startup Screen

A prompt will be displayed in the terminal by pressing the Enter key when starting up **DM-NE300E**. Commands can be entered in this state.

Note: Connection cannot be established via terminal software if Telnet is connected.

12.2.2 List of Commands

(1) Setting commands for which reboot is not required

[Bitrate Alteration]

Command : **ChangeBitrate**
Argument : Bitrate in units of Mbps. Be sure to set to 1 decimal place or more. For example, state as follows to set to 6 Mbps
Example : ChangeBitrate 6.0
Operation : Alters bitrate. The largest possible rate within the specified range will be selected as the bitrate.

[Delay Mode Alteration]

Command : **ChangeDelayMode**
Arguments : 0_Normal Mode (high video quality); 1_Low Delay Mode
Example : ChangeDelayMode 1
Operation : Alters Delay mode. Select Low Delay to shorten delay time and Normal to give priority to video quality.

[Audio Mode Alteration]

Command : **ChangeAudioMode**
Arguments : 0_Audio Off; 1_Audio On
Example : ChangeAudioMode 1
Operation : Selects Audio Off/Audio On. When Audio Off is selected, more bitrate will be assigned to video, hence enhancing the video quality.

12. More Details on Settings

[Data Protocol Alteration]

Command : **ChangeDataProtocol**
Arguments : 0_RTP; 2_MPEG Only (1 is used for special experiments. Do not specify as 1.)
Example : ChangeDataProtocol 2
Operation : Alters MPEG-2 data protocol to be stored in UDP.

[Auto Start Mode Alteration]

Command : **ChangeAutoStart**
Arguments : 0_OFF; 1_ON
Example : ChangeAutoStart 0
Operation : Alters the Auto Start mode. When Auto Start mode is turned on, data transmission will automatically start upon startup of **DM-NE300E**. When in the Unicast mode, data will be transmitted to the destination address specified at ChangeDestinationAddress. When in the Multicast mode, data will be sent to the destination address specified at ChangeMulticastAddress.

[Unicast / Multicast Selection]

Command : **ChangeMulticastMode**
Arguments : 0_Unicast; 1_Multicast
Example : ChangeMulticastMode 0
Operation : Switches between unicast and multicast modes.

[Multicast Address Alteration]

Command : **ChangeMulticastAddress**
Arguments : IP address enclosed in double quotation marks. Separate the decimal integers using periods when entering the IP address. Select address between 224.0.0.0 and 239.255.255.255.
Example : ChangeMulticastAddress “225.0.1.1”
Operation : Alters destination address of multicast transmission.

[Destination Port Number Alteration]

Command : **ChangeMulticastPort**
Arguments : Port Number (0~65535)
Example : ChangeMulticastPort 10000
Operation : Alters destination port number of multicast transmission.

[Multicast TTL Alteration]

Command : **ChangeMulticastTTL**
Argument : TTL
Example : ChangeMulticastTTL 64
Operation : Alters TTL (Time to Live) for multicast. TTL indicates how many times the packets can pass through routers.

[Selection of Stop Mode During Multicast]

Command : **ChangeMulticastStopMode**
Arguments : 0_Stop when all decoders stop; 1_Stop when Master Decoder stops; 2_Stop manually
Example : ChangeMulticastStopMode 0
Operation : Specifies stop mode during multicast transmission.

[Serial Port Baud Rate Alteration]

Command : **ChangeSerialPortBaudrate**
Arguments : Baud rate. Select any of the following:
110, 134, 150, 200, 300, 600, 1200, 2400, ,3600, 4800, 7200, 9600, 19200, 31250, 38400
Example : ChangeSerialPortBaudrate 9600
Operation : Alters baud rate of serial port.

[Serial Port Data Length Alteration]

Command : **ChangeSerialPortDataLength**
Arguments : Data Length (7 or 8)
Example : ChangeSerialPortDataLength 8
Operation : Alters data length of serial port.

[Serial Port Parity Alteration]

Command : **ChangeSerialPortParity**
Arguments : 0_No Parity; 1_Odd; 2_Even
Example : ChangeSerialPortParity 1
Operation : Alters parity of serial port.

[Serial Port Stop Bit Alteration]

Command : **ChangeSerialPortStopBit**
Arguments : Stop Bit (1 or 2)
Example : ChangeSerialPortStopBit 1
Operation : Alters stop bit of serial port.

[Serial Port Flow Control Alteration]

Command : **ChangeSerialPortFlowControl**
Arguments : 0_None; 1_Xon/Xoff; 2_Hardware
Example : ChangeSerialPortFlowControl 1
Operation : Alters flow control of serial port. Flow control prevents omission of data at the serial port. However, data transmission rate will be lowered as a result. Data may be lost as a consequence when an excessive amount of data from the network passes through the serial port in the flow control mode.

[Destination IP Address]

Command : **ChangeDestinationAddress**
Argument : IP address enclosed in double quotation marks. Separate the decimal integers using periods when entering the IP address.
Example : ChangeDestinationAddress “10.0.0.100”
Operation : Alters destination IP address for unicast. Destination address when transmitting data manually from **DM-NE300E**. The destination IP address changes accordingly with the decoder using the RTSP protocol when transmitting/receiving with the **DM-ND300E** decoder.

[Destination Port Number Alteration]

Command : **ChangeDestinationPort**
Arguments : Port Number (0~65535)
Example : ChangeDestinationPort 10000
Operation : Alters the destination port number for unicast. Destination port number when transmitting data manually from **DM-NE300E**. The destination port number changes accordingly with the decoder using the RTSP protocol when transmitting/receiving with the **DM-ND300E** decoder.

[Unicast TTL Alteration]

Command : **ChangeUnicastTTL**
Argument : TTL
Example : ChangeUnicastTTL 64
Operation : Alters the TTL (Time to Live) for unicast. TTL indicates how many times the packet can pass through routers.

12. More Details on Settings

[Telnet Password Alteration]

Command : **ChangeTelnetPassword**
Arguments : New user name and new password enclosed in double quotation marks.
Example : ChangeTelnetPassword “NewUserName”, “NewPwd”
Operation : Alters user name and password when logging in via Telnet. Be careful not to forget new user name and password. Otherwise, connection with Telnet will fail.

[HTTP Server Password Alteration]

Command : **ChangeHTTPPassword**
Argument : New password enclosed in double quotation marks.
Example : ChangeHTTPPassword “NewPwd”
Operation : Alters password when accessing via the browser. Be careful not to forget new password. Otherwise, connection from the browser will fail.

[Undo Previous Command]

Command : **Undo**
Argument : Nil
Operation : Undo the last setting command executed.

[Redo Last Undone Command]

Command : **Redo**
Argument : Nil
Operation : Redo the last undone command.

(2) Setting commands requiring reboot

Reboot of **DM-NE300E** is required to enable parameters altered using the commands below. Reboot using either the power ON/OFF or reboot command. Reboot command is recommended for consistency of nonvolatile memory. Reboot command is **‘reboot’** .

[Self IP Address and Subnet Mask Alteration]

Command : **ChangeIPAddress**
Argument : Enter the IP address in double quotation marks in the initial argument and the subnet mask in double quotation marks in the second argument. Separate decimal integers with periods when entering the IP address and subnet mask.
Example : ChangeIPAddress “192.168.4.6”, “255.255.255.0”
Operation : Alters self IP address and subnet mask. To restart upon executing this command, type ‘reboot’. About 20 seconds are required for reboot.

[Default Gateway Alteration]

Command : **ChangeDefaultGateway**
Argument : IP address enclosed in double quotation marks. Separate decimal integers with periods when entering the IP address.
Example : ChangeDefaultGateway “10.0.0.254”
Operation : Alters the default gateway. To delete the default gateway setting, do not enter anything in the double quotation marks and type **ChangeDefaultGateway “”**. To restart upon executing this command, type ‘reboot’. About 20 seconds are required for reboot.

[Restore Factory Settings]

Command : **InitParameters**
Argument : Nil
Operation : Restore all parameters to their factory settings. To restart upon executing this command, type 'reboot'. About 20 seconds are required for reboot. Upon reset, IP address of **DM-NE300E** becomes 10.0.0.1.

(3) Information Display Commands

[Status Display]

Command : **Status**
Argument : Nil
Operation : Displays status information.

[List of Decoders]

Command : **JoiningMember**
Argument : Nil
Operation : Displays list of IP addresses of decoders currently receiving data.

[Error Log Display]

Command : **ErrorLog**
Argument : Nil
Operation : Displays error log.

[List of Commands]

Command : **Help**
Argument : Nil
Operation : Displays list of commands in alphabetical order.

(4) Stream Control Command

[Start Transmission]

Command : **Play**
Argument : Nil
Operation : Starts manual stream transmission from **DM-NE300E**. When in the Unicast mode, data is transmitted to the destination address specified in ChangeDestinationAddress. When in the Multicast mode, data is transmitted to the multicast address specified in ChangeMulticastAddress.
Use the ChangeMulticast command to switch between unicast and multicast modes.

[Stop Transmission]

Command : **Stop**
Argument : Nil
Operation : Stops stream transmission.

12. More Details on Settings

12.3 Setting via Telnet on the Computer

12. 3. 1 Connection with Computer

(1) Connection

Connect **DM-NE300E** and PC via the network. Execute the ping command to check whether network connection between the PC and **DM-NE300E** is successful. For example, if IP address of **DM-NE300E** is 10.0.0.1, then activate the command prompt on the PC and enter

ping 10.0.0.1.

If connection is successful, the following response from **DM-NE300E** will be displayed:

Reply from 10.0.0.1: bytes=32 time<10ms TTL=64

The following timeout will be displayed if connection is unsuccessful:

Request timed out.

Note: Factory setting of IP address of **DM-NE300E** is 10.0.0.1.

(2) Starting up Telnet

Startup Telnet on the PC. Type in the command prompt in the case of Windows-based PCs. For example, if IP address of **DM-NE300E** is set as 10.0.0.1, then type in telnet 10.0.01. User name and password will be required. Enter both. Initial settings of user name and password for **DM-NE300E** are:

User Name: user_name

Password : password

Note: It is recommended that user name and password be changed immediately for security reasons.

To make alterations, use the ChangeTelnetPassword command as mentioned above.

When you want more display lines on Telnet, increase the buffer size in the Telnet Software Settings.

Note: Only 1 Telnet can be connected at one time. Connection is not possible when **DM-NE300E** is already connected with other Telnet.

12. 3. 2 Commands

Same as terminal software.

Note: When **DM-NE300E** is restarted, connection with Telnet is cut off.

Re-establish connection to continue operation from Telnet after **DM-NE300E** is restarted.

12. 3. 3 End Telnet

Enter logout.

When Telnet cannot be shut down properly due to network or PC trouble, previous connection of **DM-NE300E** with Telnet will remain intact and new connection from Telnet cannot be established. In this case, Telnet connection will be automatically cut off upon timeout and new connection will be enabled after 10 minutes.

Telnet connection can also be disconnected by rebooting **DM-NE300E** via the browser.

DM-NE300E MPEG-2 NETWORK ENCODER

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